

AMENDMENT TO THE CLAIMS

Replace the claims with the following rewritten version:

1.-16. (Cancelled)

17. (Previously Presented) A method for providing parking aid for a vehicle, comprising:
- recording of ambient data in an external area of a vehicle,
 - calculation of dimensions of a specific area using the recorded ambient data,
 - and
 - evaluation of a suitability of the specific area as a parking space taking into account the calculated dimensions and known, vehicle-specific reference values,
 - wherein the recording of ambient data comprises recording three-dimensional images of surroundings by means of an optical 3-D system.
18. (Previously Presented) The method as claimed in claim 17, wherein said optical 3-D system comprises a 3-D camera.
19. (Previously Presented) The method as claimed in claim 17, wherein the recording of ambient data comprises the recording a situation image of the entire area of interest.
20. (Previously Presented) The method as claimed in claim 17, wherein the recording of ambient data comprises the successive recording of adjacent component images of the area of interest.
21. (Previously Presented) The method as claimed in claim 17, wherein a topographical image of the specific area is created on the basis of the recorded ambient data.

22. (Previously Presented) The method as claimed in claim 17, wherein an obstacle in the specific region is detected on the basis of the recorded surroundings.
23. (Previously Presented) The method as claimed in claim 17, wherein a result of the evaluation step is signaled to a driver of the vehicle.
24. (Previously Presented) The method as claimed in claim 17, wherein, in addition to the calculation of the dimensions of the specific area, the position of the specific area with respect to the vehicle is determined on the basis of the recorded ambient data.
25. (Previously Presented) The method as claimed in claim 24, wherein the calculated dimensions and position of the specific area are transmitted to a control system for an automatic parking system.
26. (Currently Amended) A device for providing parking aid for a vehicle, comprising
a sensor device configured for recording ambient data in an external area of
a vehicle, and
an evaluation device configured for calculating dimensions of a specific area on a basis
of the recorded ambient data and for evaluating a suitability of the specific area as a parking
space on a basis of the calculated dimensions and known, vehicle-specific reference values,
wherein the sensor device comprises an optical 3-D sensor system for
recording three-dimensional images of surroundings.
27. (Previously Presented) The device as claimed in claim 26, wherein the optical 3-D system comprises a 3-D camera.
28. (Previously Presented) The device according to claim 26, wherein the

evaluation circuit determines the dimensions of the specific area on the basis of a situation image of the entire area of interest.

29. (Previously Presented) The device as claimed in claim 26, wherein the evaluation circuit determines the dimensions of the specific area on the basis of a plurality of successively recorded component images of the area of interest, wherein the various component images are correlated with one another by way of a determined vehicle velocity.
30. (Previously Presented) The device as claimed in claim 26, wherein the sensor device operates in the infrared range.
31. (Previously Presented) The device as claimed in claim 26, wherein the evaluation device is coupled to an information system for outputting a result of the evaluation step to a driver of the vehicle.
32. (Previously Presented) The device as claimed in claim 26, wherein the evaluation unit has means for determining the position of the specific area with respect to the vehicle.
33. (Previously Presented) The device as claimed in claim 31, wherein the evaluation device is coupled to a control system for an automatic parking system in order to transmit dimension data and position data of the specific area.
34. (Previously Presented) The device as claimed in claim 26, wherein the optical 3-D sensor system is mounted on the vehicle, in the external area of the vehicle.
35. (Currently Amended) A method for providing parking aid for a vehicle, comprising

~~recording of ambient data in an external area~~three-dimensional images of surroundings of a vehicle by means of an optical 3-D camera,

~~detection of a rear boundary of a specific area of said surroundings, said specific area being potentially suitable as a parking space,~~

~~eliminating a background from said three-dimensional images on account of said rear boundary;~~

~~calculation of dimensions of a said specific area using the recorded ambient data~~said three-dimensional images from which said background has been eliminated, and

~~evaluation of a suitability of the specific area as a parking space taking into account the calculated dimensions and known, vehicle-specific reference values;~~

~~wherein the recording of ambient data comprises recording three-dimensional images of surroundings by means of an optical 3-D camera.~~

36. (Currently Amended) The method as claimed in claim 35, wherein the recording of three-dimensional images ~~ambient data~~ comprises the recording a situation image of the entire area of interest.

37. (Currently Amended) The method as claimed in claim 35, wherein the recording of three-dimensional images ~~ambient data~~ comprises the successive recording of adjacent component images of the area of interest.

38. (Currently Amended) The method as claimed in claim 35, wherein a topographical image of the specific area is created on the basis of the recorded three-dimensional images ~~ambient data~~.

39. (Previously Presented) The method as claimed in claim 35, wherein an obstacle in the specific region is detected on the basis of the recorded surroundings.

40. (Previously Presented) The method as claimed in claim 35, wherein a result

of the evaluation step is signaled to a driver of the vehicle.

41. (Currently Amended) The method as claimed in claim 35, wherein, in addition to the calculation of the dimensions of the specific area, the position of the specific area with respect to the vehicle is determined on the basis of the recorded three-dimensional images~~ambient data~~.

42. (Previously Presented) The method as claimed in claim 41, wherein the calculated dimensions and position of the specific area are transmitted to a control system for an automatic parking system.

43. (Currently Amended) A device for providing parking aid for a vehicle, comprising
an optical 3-D camera recording three-dimensional images of surroundings
~~sensor device for recording ambient data in an external area of a vehicle, and~~
an evaluation device configured to detect a rear boundary of a specific area of said surroundings, said specific area, eliminating a background from said three-dimensional images on account of said rear boundary, for calculating dimensions of a said specific area on a basis of the recorded ambient data~~three-dimensional images from which said background has been eliminated~~, and ~~for evaluating a suitability of the specific area as a parking space on a basis of the calculated dimensions and known, vehicle-specific reference values,~~
~~wherein the sensor device comprises an optical 3-D camera for recording three-dimensional images of surroundings.~~

44. (Previously Presented) The device according to claim 43, wherein the evaluation circuit determines the dimensions of the specific area on the basis of a situation image of the entire area of interest.

45. (Previously Presented) The device as claimed in claim 43, wherein the evaluation circuit determines the dimensions of the specific area on the basis of a

plurality of successively recorded component images of the area of interest, wherein the various component images are correlated with one another by way of a determined vehicle velocity.

46. (Previously Presented) The device as claimed in claim 43, wherein the sensor device operates in the infrared range.
47. (Previously Presented) The device as claimed in claim 43, wherein the evaluation device is coupled to an information system for outputting a result of the evaluation step to a driver of the vehicle.
48. (Previously Presented) The device as claimed in claim 43, wherein the evaluation unit has means for determining the position of the specific area with respect to the vehicle.
49. (Previously Presented) The device as claimed in claim 47, wherein the evaluation device is coupled to a control system for an automatic parking system in order to transmit dimension data and position data of the specific area.
50. (Previously Presented) The device as claimed in claim 43, wherein the optical 3-D sensor system is mounted on the vehicle, in the external area of the vehicle.
51. (New) The method as claimed in claim 18, wherein a rear boundary of a specific area of said surroundings is detected, said specific area being potentially suitable as a parking space, wherein a background is eliminated from said three-dimensional images on account of said rear boundary, and wherein said evaluation of the suitability of the specific area as a parking space, taking into account the calculated dimensions and known vehicle specific reference values, is based upon said three-

dimensional images from which said background has been eliminated.

52. (New) The device as claimed in claim 26, wherein said evaluation device is configured to detect a rear boundary of a specific area of said surroundings that is potentially suitable as a parking space, eliminate a background from said three-dimensional images on account of said rear boundary, and evaluate the suitability of the specific area as a parking space taking into account the calculated dimensions and known vehicle specific reference values, based upon said three-dimensional images from which said background has been eliminated.